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Wilfrid Laurier University Combines Physics  
and Data Processing in a New Honours Program

Wilfrid Laurier University has announced the establishment of a new Honours program which will combine the study of physics and computer data processing.

The new four-year program, Honours Computing and Computer Electronics, is scheduled to begin this fall, and is expected to provide wide career opportunities for graduates.

"It's a high-level, career-oriented Honours program, consisting of rich physics and computing courses, to develop a person with a clear grasp of computer applications enhanced by his technical insights" says Dr. Hart Bezner, director of WLU's Computing Center. Dr. Bezner is himself a physicist.

He notes that graduates of the program will have "much freedom and many choices" in the rapidly expanding world of computing.

The new program is a co-operative venture by the WLU Physics Department and the Computing Center of the University. Dr. Bezner sees a great need for individuals who understand both fields in depth.

"A gap exists between the programmer and the computer technician or computer technologist" he says. This gap has produced some "real horror stories" in the world of business and industry.

"Industry is full of nightmares implemented by programmers who did not understand the hardware." Frequently, he points out, a programmer may not have used a computer as efficiently and successfully as he might have, "because he didn't understand how the thing really worked".

Honours Computing and Computer Electronics will appeal to very special students, those who are "gifted with a love both for science and for computers" says Dr. John Lit, current chairman of the WLU Physics Department.

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The successful application of computers involves two specific areas: the "user interface" or ability to make the computer perform tasks, and the ability to understand how the computer functions. Training in these areas has usually not been combined.

"Traditionally, people have been taught to do only one of these things" Dr. Bezner says. This has led to the development of two separate kinds of skills; namely, data processing and computer hardware technology. Such a separation has caused problems, he points out.

"The nature of traditional computing is such that invariably two camps emerge. One camp consists of applications programmers or users, while the other camp consists of hardware experts". The two sides have "radically differing preoccupations", a situation which sometimes leads to very real communication problems on the human level.

The tendency to focus on only one of these special fields of knowledge "often blocks fruitful communication between these two vital areas. The new WLU program will bring about a successful marriage between them".

Organizers say that, to their knowledge, there is no comparable program in other Canadian universities at present.

The Honours students will receive a thorough exposure to fundamental computer-related physics concepts, culminating in advanced digital electronics. At the same time, they will gain a thorough grounding in computer programming and data processing applications techniques.

According to Dr. Lit, "those who graduate from the program will have the advantage of knowing the computer both inside and outside".